Lesson 1: Nature of Monetary Economics

Monetary Economics | February 18, 2026

Agenda

- Definition of Monetary Economics
- Functions of Money
- Prices and the Value of Money
- Inflation Rate
- Headline Inflation vs. Core Inflation
- What Causes Inflation?
- Market Basket

Definition of Monetary Economics

The economics of the money supply, prices and interest rate, and their repercussions on the economy.

It focuses on the monetary and other financial markets, the determination of the interest rate, the extent to which these influence the behavior of the economic units and the implications of that influence in the macroeconomic context.

Functions of Money

- Medium of exchange – it makes transactions efficient and eliminates the need for double coincidence of wants.
- Unit of account – it provides a standard measure of value and makes transactions fair and comparable.
- Store of value – money is a good store of value if inflation is stable. Always remember to compare earnings with investment returns.
- Standard of deferred payments – used for future payments like loans and credit.

Prices and the Value of Money

Changes in the price level are caused by two factors:

- changes in the supply of money, and
- changes in the supply of goods and services.

It states that as the price level increases, the value of money decreases.

Inflation Rate

Inflation rate is the annual rate of change or the year change in Consumer Price Index (CPI). It shows how fast or slow the CPI increases or decreases.

Consumer Price Index (CPI) – measurement of a basket of consumer goods and services from different sectors of the market and their average price over a period of time.

Headline Inflation vs. Core Inflation

Headline Inflation – measures changes in the cost of living based on movements in the prices of a specified basket of major commodities. It refers to the annual rate of change or the year-on-year change in the Consumer Price Index (CPI).

Core Inflation – the year-on-year rate of change of the monthly headline CPI after excluding food and energy items.
– Shows underlying inflation trend.

What Causes Inflation?

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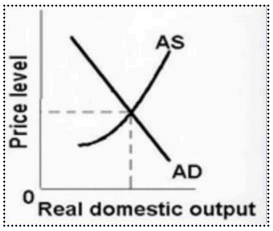


Inflation occurs if Aggregate Demand (AD) > Aggregate Supply (AS).

Prices increase when

Supply < Demand Demand > Supply

Prices decrease when

Supply > Demand Demand < Supply

As the price level increases, people need more money for transactions, so money demand rises. If the money supply does not change, this leads to a higher interest rate.

When interest rates go up, borrowing becomes more expensive. Because of this, investment decreases. In general, interest rate and investment are inversely related.

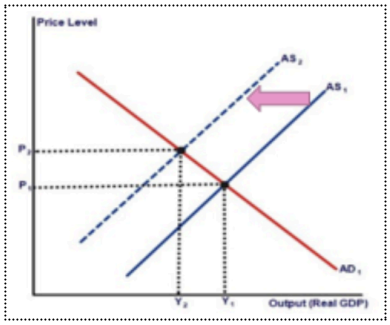
Interest rate ↑ Cost of borrowing ↑ Investment ↓ Firms and households borrow less. **Interest rate ↓** Cost of borrowing ↓ Investment ↑ People can do more loans and spending.

Nagiging opportunity cost ang interest rate kapag may enough money ang mga tao where they can choose between holding cash or investing it.

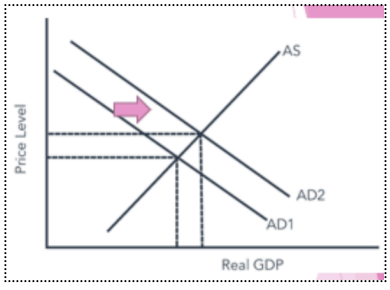
The exchange rate also affects inflation. If the peso appreciates, imports become cheaper while exports become more expensive, so exports may decrease.

Other Effects of Inflation

- Interest Rate Effect – changes in the interest rate impact overall economic activity.
- Wealth Effect (Real Balance Effect) – people spend more as the value of their assets rise.
  – Classical economists stated that "when there is no government intervention, prices will adjust automatically to reach equilibrium."



1. Cost-push Inflation – due to increase in cost of production and other supply factors (e.g. weather disturbances, increase in the world oil prices).
– When peso depreciates, imported raw materials become expensive.
– Usually outside the influence of BSP.



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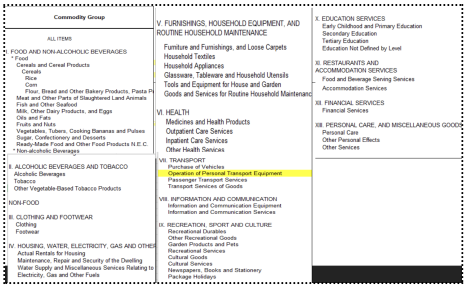
2. Demand-pull Inflation – due to excess demand relative to supply of goods and services (e.g. increase in money supply).

– This can be caused by an increase in money supply and higher consumption and investment.

– BSP exerts influence over money supply to control inflation through interest rates or monetary policies.

Market Basket



A market basket is a fixed, representative collection of goods and services commonly purchased by households, used to track changes in the cost of living and calculate inflation.

Consumer Price Index

Consumer Price Index measures only the change in the prices of a "basket" of goods consumed by a typical household.

– It uses base year quantities rather than current year quantities in calculating the price level index value.

– It is an indicator of the change in the average prices of a fixed basket of goods and services commonly purchased by households relative to a base year.

CPI Formula

$$\text{CPI} = \frac{\text{base year basket quantities multiplied by current year prices}}{\text{base year basket quantities multiplied by base year prices}} \times 100$$

Good	Base year quantity	Base year price	Base year expenditure	Current year price	Current year expenditure
Pizza	12	11.25	135.00	12.00	144.00
Soda	25	1.55	38.75	1.45	36.25
Ice cream	15	2.95	44.25	3.05	45.75
		218.00			**226.00**

Example #1: Assume for the sake of simplicity that the basket of goods consumed by a typical household consisted of just three goods: pizza, soda, and ice cream. The quantities consumed of each of these three goods in the base year are given in Table, along with the prices of these three goods in both the base year and the current year.

The base year expenditure figures are found by multiplying the base year quantities by the base year prices. Similarly, the current year expenditure figures are found by multiplying the base year quantities by the current year prices. In order to calculate a CPI for this basket of three goods, one needs only the total base year and current year expenditures on all three goods. The CPI value for the current year may then be calculated as follows:

$$\text{current year CPI} = \left[\frac{226.00}{218.00}\right] \times 100 = 103.67$$

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Note: The CPI value for the base year is always equal to 100.

In this case, the percentage change in the current year CPI from the base year CPI is the rate of inflation in the current year is 3.67%

$$\text{percentage change in CPI} = \left[\frac{103.67 - 100}{100}\right] \times 100\% = 3.67\%$$

Example #2

Consumer Price Index for All Income Households by Commodity Group (2018=100): January 2018 - January 2025

		2023			2024			2025	
		Jan	Feb	Mar	Jan	Feb	Mar	Jan	
PHILIPPINES	0 - ALL ITEMS	121.4	121.4	121.1	124.8	125.5	125.6	128.4	
	01 - FOOD AND NON-ALCOHOLIC BEVERAGES	124.6	123.6	122.1	128.9	129.3	128.9	133.8	
	01.1 - FOOD	125.5	124.2	122.6	129.7	130.1	129.6	134.9	
National Capital Region (NCR)	0 - ALL ITEMS	118.2	118.2	118.0	121.4	121.9	121.9	124.9	
	01 - FOOD AND NON-ALCOHOLIC BEVERAGES	124.6	122.8	121.1	127.0	126.9	126.5	134.0	
	01.1 - FOOD	126.0	123.9	122.0	128.3	128.2	127.7	135.7	
Areas Outside National Capital Region (NCR)	0 - ALL ITEMS	122.3	122.2	121.8	125.6	126.4	126.5	129.3	
	01 - FOOD AND NON-ALCOHOLIC BEVERAGES	124.6	123.7	122.3	129.2	129.8	129.3	133.8	
	01.1 - FOOD	125.4	124.2	122.7	129.9	130.5	130.0	134.7	

$$\text{IR} = \frac{CPI2 - CPI1}{CPI1} \; x \; 100$$

$$\text{IR}_{\text{2023-2024 (Jan)}} = \frac{124.8 - 121.4}{121.4}$$
$$= 2.80\%$$

$$\text{IR}_{\text{2024-2025 (Jan)}} = \frac{128.4 - 124.8}{124.8}$$
$$= 2.88\%$$

Purchasing Power of Peso (PPP)

Purchasing Power of Peso (PPP) shows how much the peso in the base period is worth in another period. It gives an indication of the real value of peso in a given period relative to the peso value in the base period.

Purchasing Power of Peso Formula

$$\text{PPP} = \frac{1}{CPI} \; x \; 100$$

Example #1

$$\text{PPP} = \frac{1}{CPI} \; x \; 100$$

$$= \frac{1}{112.5} \; x \; 100$$
$$= .89$$

The peso in 2018 is worth 0.89 centavos in March 2022, which means that the same basket of goods and services that can be bought at P89 in 2018 is worth P100 in March 2022.

More simply, your P100 in March 2022 can buy only 89% of the total goods and services in the market basket.

Example #2

	2023			2024			2025		
	Jan	Feb	Mar	Jan	Feb	Mar	Jan	Feb	Mar
PHILIPPINES									
Purchasing Power of Peso	0.82	0.82	0.83	0.80	0.80	0.80	0.78	..	..
National Capital Region (NCR)									
Purchasing Power of Peso	0.85	0.85	0.85	0.82	0.82	0.82	0.80	..	..
Areas Outside National Capital Region (NCR)									
Purchasing Power of Peso	0.82	0.82	0.82	0.80	0.79	0.79	0.77	..	..

Demonetization

Demonetization – the process by which a central bank removes the monetary value of a legal tender currency it issues.

Demonetized currencies are no longer accepted as payment for goods and services.

The process of demonetization is widely practiced throughout the world, though reasons for demonetizing can be varied. Among the common reasons are the following:

- The prevention of counterfeiting
- Benchmarking with other countries
- A change in the type or form of government
- A change in the type of currency as part of political or social reform
- Redefining the value of money in response to hyperinflation

- Shift to a single design series of currency in countries where more than one series are in circulation
- To safeguard the integrity of Philippine currency.

Demonetization is within the BSP's jurisdiction as stated in RA No. 7653, or The New Central Bank Act.

"The Bangko Sentral may call for replacement of notes of any series or denomination which are more than five (5) years old and coins which are more than ten (10) years old. Notes and coins called in for replacement in accordance with this provision shall remain legal tender for a period of one year from the date of call. After this period, they shall cease to be legal tender but during the following year, or for such a longer period as the Monetary Board may determine, they may be exchanged at par and without charge in the Bangko Sentral and by agents duly authorized by the Bangko Sentral for this purpose. After the expiration of this latter period, the notes and coins which have not been exchanged shall cease to be a liability of the Bangko Sentral and shall be demonetized. The Bangko Sentral shall also demonetize all notes and coins which have been called in and replaced"